

B.Sc. Part—II (Semester—IV) Examination

SEED TECHNOLOGY

(Seed Testing and Seed Quality Control)

Time : Three Hours]

[Maximum Marks : 80

Note :— (1) All questions are compulsory.

(2) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :

- (i) _____ is quality control system, whereby seeds and propagating materials are maintained at high level of genetic purity. $\frac{1}{2}$
- (ii) Labelling for mercurials and other toxic substances, use the caution _____ prominently displayed in red colour. $\frac{1}{2}$
- (iii) _____ is the emergence and development of a seedling from the seed embryo. $\frac{1}{2}$
- (iv) The components examined in purity analysis are _____, seeds of other species and inert matter. $\frac{1}{2}$

(B) Choose the appropriate alternative :

- (i) Application procedure for seed certification needed _____.
- (a) Variety and class of seed planted (b) Size and location of field
- (c) Previous field cropping history (d) All of this $\frac{1}{2}$
- (ii) The _____ Act describes minimum standards for seed quality.
- (a) Fruit (b) Flower
- (c) Seed (d) None $\frac{1}{2}$
- (iii) According to ISTA, the seedlings having following defects are grouped into abnormal seedlings :
- (a) Damaged seedling (b) Deformed seedling
- (c) Decayed seedling (d) All of above $\frac{1}{2}$

(iv) In accordance with the ISTA rules minimum number of _____ seeds is required for germination test.

- | | | |
|---------|---------|---|
| (a) 400 | (b) 800 | |
| (c) 100 | (d) 600 | ½ |

(C) Answer in **one** sentence :

- | | |
|---|---|
| (i) What is mean by OECD ? | 1 |
| (ii) Which seed help cultivar to obtain maximum yield ? | 1 |
| (iii) What is Routine test ? | 1 |
| (iv) What is basic purpose of seed legislation ? | 1 |

2. Explain in brief :

- | | |
|---|---|
| (a) Seed testing laboratory management. | 4 |
| (b) Moisture testing. | 4 |
| (c) Seedling evaluation. | 4 |

OR

- | | |
|-------------------------------|---|
| (d) Physical purity analysis. | 4 |
| (e) Germination testing. | 4 |
| (f) Seed testing equipments. | 4 |

3. Describe in detail seed testing in relation to Seed Act and marketing. 12

OR

Explain in brief :

- | | |
|-----------------------------|---|
| (a) Seed vigour testing. | 6 |
| (b) Culture purity testing. | 6 |

4. Describe in brief :

- | | |
|-----------------------|---|
| (g) Seed quality. | 4 |
| (h) Seed legislation. | 4 |
| (i) Genetic purity. | 4 |

OR

- (j) Physical purity. 4
- (k) Concept of variety variation. 4
- (l) Seed certification. 4
- 5. Explain in brief :
 - (m) History of seed certification. 4
 - (n) Principles of field inspection. 4
 - (o) Importance of Isolation distance. 4

OR

- (p) Seed certification standards. 4
- (q) Phases of seed certification. 4
- (r) Land requirements. 4
- 6. Describe in brief inspection at harvesting, threshing and processing of seeds. 12

OR

Describe in detail :

- (p) Sampling for seed quality evaluation. 6
- (q) New Seed Policy (1988) provisional seed certification. 6
- 7. Describe in brief :
 - (s) OECD. 4
 - (t) Plant breeders right. 4
 - (u) Central Seed Certification Board. 4

OR

- (v) International seed certification. 4
- (w) Function of Central Seed Committee. 4
- (x) Future trends in seed certification. 4

